Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS")	GN Docket No. 96-228

COMMENTS OF DIGITAL SATELLITE BROADCASTING CORPORATION

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I. SUMMARY AND INTRODUCTION

Digital Satellite Broadcasting Corporation ("DSBC") submits these comments in response to the notice of proposed rule making released by the Federal Communications Commission ("Commission" or "FCC") November 12, 1996 in the above-captioned proceeding.[1] DSBC, one of the applicants for a satellite Digital Audio Radio Services ("DARS") license, does not oppose the Commission's efforts to establish a new Wireless Communications Service ("WCS") in the 2305-2320 and 2345-2360 MHz bands, subject to the recommendations set forth below.

Specifically, it is imperative that, in reallocating the proposed WCS bands, the Commission impose out-of-band emissions requirements that adequately protect satellite DARS operations at 2320-2345 MHz. In addition, the Commission should allow DARS

[1] *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, GN Docket No. 96-228, FCC No. 96-441, Notice of Proposed Rule Making, (Nov. 12, 1996) ("NPRM").

operators to compete for licenses in the 2305-2320 and 2345-2360 MHz bands for supplemental purposes. DSBC also urges the Commission to maximize the efficient use of this spectrum by awarding WCS licenses in narrow spectrum blocks (5 MHz) and for geographic areas no larger than Major Trading Areas ("MTAs"). Finally, DSBC requests that the FCC adopt appropriate measures to ensure that designated entities are able to participate in the provision of WCS in the proposed bands.

II. THE COMMISSION SHOULD NOT ALLOW REALLOCATION OF THE PROPOSED WCS SPECTRUM TO IMPEDE THE DEVELOPMENT OF DOMESTIC SATELLITE DARS

DSBC does not object to the Commission's efforts to encourage flexible use of the proposed WCS spectrum through a broadly based allocation permitting a range of "fixed, mobile, radiolocation and broadcasting-satellite services."[2] In implementing this allocation, however, the Commission must ensure appropriate protection for the expected DARS operations in the 2320-2345 MHz band. The Commission can achieve this protection consistent with its goal of fostering innovative and diverse uses in the proposed WCS spectrum. Specifically, as discussed more fully below, the Commission should (1) establish out-of-band emission limits on WCS licensees to protect satellite DARS operations at 2320-2345 MHz and (2) allow satellite DARS at 2305-2320 and 2345-2360 MHz.

[2] NPRM at ¶ 9.

A. The Commission Should Require All New WCS Licensees To Adhere To Out-Of-Band Emission Limits That Adequately Protect Satellite DARS Operations In The 2320-2345 MHz Band

It is imperative that the Commission avoid disrupting, and potentially crippling, domestic satellite DARS operations in the 2320-2345 MHz band by establishing appropriate out-of-band emission limits on WCS licensees. As the Commission is well aware, while procedures for siting fixed satellite receivers to avoid terrestrial interference have been in place for many years, the problem of interference to mobile satellite receivers from terrestrial transmitters is a relatively new one.[3] Because satellite receivers must operate with much lower level signals compared to receivers operating with terrestrial transmitters, the Commission cannot simply rely on its existing out-of-band emissions level limits for terrestrial transmitters to provide sufficient protection to satellite DARS receivers.

DSBC's preliminary analyses of the FCC's proposed out-of-band emissions requirements for WCS operations indicate that those limits would fail to protect adjacent satellite DARS receivers from harmful interference. For example, initial calculations using the proposed protection limits suggest that mobile PCS-like transmitters operating in the WCS bands adjacent to the dedicated DARS spectrum would need to be separated by substantial distances (more than several miles) from mobile DARS receivers to avoid harmful interference. The problem, of course, is that this degree of physical separation cannot be achieved if consumers are using these services in their cars. The resulting interference to satellite DARS receivers could cripple this new service, thereby denying consumers the benefits of the added program diversity this service promises to deliver.

[3] The Commission is now involved in this issue in regard to Big LEO terrestrial repeaters and GPS/GLONASS receivers.

To be sure, DSBC's calculations are preliminary.[4] Because of the relatively short comment period in this proceeding, DSBC was unable to complete comprehensive interference studies in time for the filing of these comments and therefore cannot offer more detailed analysis of the out-of-band emissions issues at this time. Given the significant potential impact of these interference issues on both DARS and WCS, however, DSBC will continue to examine these issues and will report additional findings as they become available. In addition, DSBC would be pleased to work with the Commission staff to help clarify the proposed WCS out-of-band emissions limits and resolve the potential interference problems.

B. The Commission Should Allow DARS Operators to Compete for Licenses In The 2305-2320 And 2345-2360 MHz Bands

As the NPRM indicates, the 2320-2360 MHz band is allocated internationally to the broadcasting-satellite service (sound).[5] Domestically, the Commission has allocated the same band on a primary basis to the broadcasting-satellite service (sound), limited to satellite DARS.[6] While the Commission now proposes to retain the DARS primary allocation at 2310-2320 and 2345-2360 MHz, it also notes the interference concerns of Canadian fixed service facilities in the 2310-2320 MHz band. Accordingly, the NPRM invites comment on whether satellite DARS should be excluded from a portion of the proposed WCS spectrum.[7]

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[4] In addition, the calculations are based on our interpretation of the proposed limits in paragraph 34 of the NPRM, which we believe need to be clarified.

[5] *See* NPRM at ¶ 4.

[6] *See Amendment of the Commission's Rules with Regard to the Establishment and Regulation of New Digital Audio Radio Services,* GEN Docket No. 90-357, Report and Order, 10 FCC Rcd 2310 (1995).

[7] See NPRM at ¶ 7.

DSBC urges the Commission to allow satellite DARS in the proposed WCS bands[8] subject only to practical constraints such as interference with other WCS users and coordination with neighboring countries. Revoking the DARS allocation in the context of this broadly cast WCS proceeding would be premature and procedurally inappropriate. The Commission, in a separate and ongoing proceeding, is already considering the coordination of U.S. satellite DARS systems with Canadian terrestrial systems.[9] As the Commission explicitly recognizes in the NPRM, potential DARS licensees and other relevant parties in that proceeding are engaged in detailed study of coordination solutions to potential Canadian interference.[10] The instant proceeding is therefore *not* an appropriate forum for determining the critical issue of the status of the satellite DARS allocation in the 2310-2320 MHz.

In addition, allowing satellite DARS in these bands is consistent with Congress' instructions for the reallocation of the proposed WCS spectrum. The Omnibus Consolidated Appropriations Act, 1997 ("Omnibus Act") directs the Commission to reallocate 2305-2320 MHz and 2345-2360 MHz "to wireless services that are consistent with international agreements concerning spectrum allocations."[11] The FCC has now appropriately proposed

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[8] The NPRM proposes allocation of 5 MHz (2305-2310 MHz) beyond the existing primary allocation for DARS. Although the NPRM does not explicitly propose that satellite DARS be allowed to operate at 2305-2310 MHz in addition to other WCS, DSBC assumes that satellite DARS would indeed be permitted in that band as well, consistent with the Commission's goal to "provide for the broadest range of services permitted under international agreements." NPRM at ¶ 6. Accordingly, the Commission should allow satellite DARS at 2305-2310 MHz, as recommended below, for the remainder of the proposed WCS spectrum.

[9] *See Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, IB Docket No. 95-91, Notice of Proposed Rule Making, 11 FCC Rcd 1 (1996). DSBC filed comments December 3, 1996 in that proceeding urging the FCC to move forward and adopt service rules and grant licenses for DARS operations. Only after that proceeding is resolved can DARS licensees evaluate whether and how they will compete for WCS spectrum for supplemental purposes.

[10] *See* NPRM at ¶ 7.

[11] Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009, § 3001(a)(1) (1996) ("Omnibus Act").

that those bands be used for a diverse range of wireless uses *in addition to satellite DARS*. The plain language of the Omnibus Act makes clear that Congress intended to make certain that non-DARS operators would be eligible to enjoy the use of this spectrum. However, the Omnibus Act does not require the Commission to prohibit satellite DARS at 2305-2320 MHz and 2345-2360 MHz altogether. Although DARS operators may not control all of the spectrum now proposed for WCS use, the Commission is free, under the Omnibus Act, to allow satellite DARS operators in the 2320-2345 MHz band to supplement those systems with portions of the proposed WCS spectrum. For example, a satellite DARS operator in the dedicated satellite DARS spectrum at 2320-2345 MHz might be able to use smaller segments of the proposed WCS band for operation of localized terrestrial repeaters, as a supplement to its DARS service. Indeed, as explained below, DARS operators could use these small segments without raising the same level of Canadian interference concern associated with more widespread use of WCS spectrum for satellite DARS.

III. TO PROMOTE THE EFFICIENT AND EFFECTIVE USE OF SPECTRUM RESOURCES, THE COMMISSION SHOULD AWARD WCS SPECTRUM LICENSES IN 5 MHz LICENSE BLOCKS SERVING MAJOR TRADING AREAS

The Commission's NPRM in this proceeding proposes to allocate 30 MHz of spectrum for a wide range of wireless communications services subject only to international requirements and coordination.[12] This type of broad authorization of services, the Commission has previously concluded, "serve[s] the public interest by fostering the provision and mix of services most desired by the public."[13] DSBC does not oppose the Commission's

[12] *See* NPRM at ¶ 9.

[13] *Id.*

goal of encouraging the development of diverse and innovative services in the newly proposed WCS spectrum, subject to the conditions recommended in these comments. To ensure efficient and flexible use of the spectrum, however, DSBC advocates that the Commission grant WCS licenses in 5 MHz blocks to serve MTAs.

A. The Partitioning Of WCS Spectrum And Service Areas Into Small Spectrum Blocks And Geographical Regions Will Encourage The Most Efficient And Flexible Use Of The Spectrum

The Communications Act of 1934, as amended, directs the Commission to encourage the efficient use of the radio spectrum, including the development of new technologies and services.[14] Specifically with respect to the bands at issue in this proceeding, Congress has mandated that the Commission "seek to promote the most efficient use of the spectrum."[15] Consistent with these obligations, the FCC should promote the efficient use of these spectrum resources by granting licenses for limited bandwidths in geographic service areas no larger than MTAs.

Typically, when the Commission allocates spectrum for a specific service, the FCC and potential licensees can gauge the size of license (both geographic and bandwidth) that will serve the public most efficiently. For example, in the case of the dedicated satellite DARS band at 2320-2345 MHz, the applicants have demonstrated that dividing the allocated spectrum into two 12.5 MHz nationwide licenses will most appropriately promote competition, serve consumer needs, and permit the introduction of economically viable satellite DARS. Indeed, it would be difficult and perhaps impossible to provide an

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[14] *See* 47 U.S.C. § 303(g) (charging the Commission with "[s]tudy[ing] new uses for radio" and "generally encourage[ing] the larger and more effective use of radio in the public interest"); 47 U.S.C. §157(a) (establishing a national policy "to encourage the provision of new technologies and services to the public").

[15] Omnibus Act, at § 3001(b)(1) (1996).

economically viable meaningful DARS service with less than 12.5 MHz. The division of the DARS spectrum into two 12.5 MHz nationwide blocks takes into account a variety of important known factors, including the number of likely competitors in the market, the expected demand for satellite DARS, and the technical constraints of the service. As a result, this division reflects the consideration of the needs and constraints of a particular service.

This proceeding, however, calls for a different approach to deciding how to divide the WCS spectrum in the most efficient manner possible. Because the Commission has not identified any particular use of the WCS spectrum as preferable to any other, or even expressed an expectation as to what services or number of entities might even desire to use the spectrum, the best course for ensuring the efficient use of the spectrum is to distribute the spectrum in the smallest possible spectrum and geographic blocks,[16] thereby allowing licensees and the public maximum flexibility to decide the best use of the spectrum. This approach allows licensees the greatest freedom to bring services to specific markets in the shortest amount of time and at the least cost. By partitioning the WCS licenses into as many blocks as possible, the Commission would provide opportunities for licensees to introduce a variety of services to the public.

Small spectrum and geographic license blocks in the context of this flexible and relatively undefined allocation would allow wireless operators that have identified specific target markets to focus their bidding resources on those markets only and to introduce services in those markets relatively quickly. In contrast, given the largely terrestrial nature of

[16] The Commission has indicated that a licensing plan consisting of 5 MHz/MTA blocks would produce the maximum number of licenses that practically could be auctioned under the timeframe required by the Omnibus Act. *See* NPRM at n. 27.

the services contemplated in the WCS bands, the licensing of large spectrum blocks (or a single 30 MHz block) on a nationwide basis would likely lead to the inefficient use of spectrum resources while the auction winners (or single winner) undertake the process of building out their systems over large areas (or possibly even nationwide). While post-auction partitioning or leasing arrangements might eventually lead to the provision of services in smaller markets, the approach advocated here would produce those services more expeditiously and without the additional transaction costs that would result from post-auction partitioning and leasing.

Smaller WCS license areas and bandwidth blocks also will promote increased innovation and buildout, particularly in the rural areas and niche markets that are least likely to be served quickly, if at all, by the winners of an auction for larger license areas and bandwidth blocks. In addition to promoting the timely and efficient use of the spectrum, this approach would also increase competition by promoting the greatest number of participants in the provision of these broadly defined wireless services.

Finally, with respect to supplemental DARS operations in the proposed WCS bands, the use of 5 MHz/MTA license blocks would likely minimize the problems that might be created by Canadian terrestrial system coordination. DSBC's understanding is that for DARS licensees supplementing their 2320-2345 MHz systems with spectrum in the proposed WCS bands (for terrestrial repeaters, for example), coordination with Canadian systems in the proposed WCS spectrum likely would be less costly and time consuming for 5 MHz/MTA DARS licenses than for larger bandwidth blocks.

B. The Commission Should Establish Opportunities For Designated Entities To Participate In The Provision Of WCS In The Proposed Bands

The proposed allocation of 30 MHz for flexible use by a wide range of wireless service licensees presents a prime opportunity for the Commission to foster the introduction of designated entities into the rapidly growing wireless industry. In particular, DSBC believes that, through an appropriate structuring of the WCS license and auction process, as described above, the Commission could substantially improve the opportunities for designated entities to provide wireless services in the proposed WCS spectrum, so long as they do so in a manner that does not cause interference with DARS licensees at 2320-2345 MHz.

Because designated entities generally have less access to capital markets than the larger corporate entities that are likely to participate in, and win, auctions for nationwide large-bandwidth WCS licenses, the use of smaller bandwidth and smaller service area WCS licenses are likely to improve the opportunities for designated entities to provide services in the proposed WCS bands. To ensure that designated entities are able to participate in the provision of wireless services at 2305-2320 and 2345-2360 MHz, the Commission should consider setting aside a 5 MHz license in each MTA for exclusive use by designated entities. This approach would ensure that at least one designated entity would be able to secure a WCS license in these bands. Alternatively, the Commission should, at a minimum, allow designated entities a 25 percent bidding credit on any of the licenses awarded as a result of the proposed WCS reallocation. DSBC urges the Commission to consider adoption of either of these approaches, or a combination of both, to encourage and ensure the participation of designated entities in the provision of wireless communications services.

CONCLUSION

For the reasons stated above, DSBC urges the Commission to reallocate the proposed WCS bands in a manner that adequately protects satellite DARS operations at 2320-2345 MHz, allow satellite DARS operators to compete for licenses in the proposed WCS bands, grant WCS licenses in 5 MHz/MTA blocks, and ensure adequate participation in WCS by designated entities.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Kimberly E. Thomas, do hereby certify that the foregoing **COMMENTS OF DIGITAL SATELLITE BROADCASTING CORPORATION** was mailed on this 4th day of December, via first class U.S. mail to the following:

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